AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A tensioning system for use in joint repair surgery involving independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning system comprising:

a plurality of breakaway guide pins adapted for attachment to a patient's bone, each breakaway guide pin including one or more notches or grooves that facilitate preferential breakage of the guide pin at or near the one or more notches or grooves, the one or more notches or grooves being spaced apart from a tip of the guide pin so that, after insertion of the guide pin into a patient's bone and breaking off a first portion of the guide pin, a remaining portion of the guide pin will extend from a patient's leg; and

a tensioning device that provides for independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning device comprising:

an attachment portion comprising a plurality of attachment posts, each configured to slidably attach to one of said breakaway guide pins when positioned in a bone so as to extend from a patient's leg; and

a tensioning portion configured to independently apply a desired tensile load to each of at least two separate strands of a soft tissue graft, the tensioning portion comprising:

a tensioning block;

a first adjustable tensioning apparatus attached to the tensioning block and configured so as to selectively increase or decrease a first tensile load applied to a first strand of a soft tissue graft in communication with the first adjustable tensioning apparatus; and

a second adjustable tensioning apparatus attached to the tensioning block in a spaced-apart relationship with the first adjustable tensioning apparatus and configured so as selectively increase or decrease a second tensile load applied to a second strand of the soft tissue graft in communication with the second adjustable tensioning apparatus

independently of the first tensile load applied by the first adjustable tensioning apparatus,

the tensioning block maintaining sufficient space between the first and second adjustable tensioning apparatus as to permit an interference screw to pass between the first and second adjustable tensioning apparatus while securing a soft tissue graft to the bone tunnel.

2. (Original) A tensioning system as defined in claim 1, wherein the breakaway guide pins are designed to be used only once and then discarded.

3. (Original) A tensioning system as defined in claim 1, each attachment post further comprising a hollow portion adapted to slidably receive therein one of the guide pins.

4. (Original) A tensioning system as defined in claim 1, each of the first and second adjustable tensioning apparatus comprising:

a tensioning piston adapted to receive and secure thereto one or more sutures attached to at least one soft tissue graft strand;

a hollow cylinder slidably disposed around at least a portion of the tensioning piston; and

a spring disposed within the hollow cylinder and communicating between the hollow cylinder and tensioning piston so as to increase the tensile load applied by the tensioning piston onto the soft tissue graft strand as the spring is compressed.

5. (Original) A tensioning system as defined in claim 4, the tensioning piston further comprising a suture attachment wheel rotatably attached thereto.

6. (Original) A tensioning system as defined in claim 4, further comprising a tensioning bolt in threadable communication with the hollow cylinder so that selective rotation of the tensioning bolt causes corresponding movement of the hollow cylinder relative to the tensioning bolt.

7. (Original) A tensioning system as defined in claim 1, further comprising one or more tensile load gauges that display the tensile load applied by each of the first and second tensioning apparatus.

8. (Original) A tensioning system as defined in claim 1, wherein the attachment portion and the tensioning portion are non-removably joined together.

9. (Original) A tensioning system as defined in claim 1, further comprising at least one suture strand separator configured for removable attachment to the tensioning device and adapted to maintain at least two suture strands attached to different ends of a multi-strand tissue graft in a desired space-apart relationship

10. (Original) A tensioning system as defined in claim 1, further comprising a tension calculator adapted for determining what portion of a total tensile load to be applied to a composite tissue graft is to be applied to each tissue graft strand individually.

11. (Previously Presented) A tensioning system for use in joint repair surgery involving independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning system comprising:

a tensioning device that provides for independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning device comprising:

an attachment portion configured to removably attach the tensioning device to a person's limb; and

a tensioning portion configured to independently apply a desired tensile load to each of at least two separate strands of a soft tissue graft, the tensioning portion comprising:

a tensioning block;

a first adjustable tensioning apparatus attached to the tensioning block and configured so as to selectively increase or decrease a first tensile load applied to a first strand of a soft tissue graft in communication with the first adjustable tensioning apparatus; and

a second adjustable tensioning apparatus attached to the tensioning block in a spaced-apart relationship with the first adjustable tensioning appratus and configured so as selectively increase or decrease a second tensile load applied to a second strand of the soft tissue graft in communication with the second adjustable tensioning apparatus independently of the first tensile load applied by the first adjustable tensioning apparatus,

the tensioning block maintaining sufficient space between the first and second adjustable tensioning apparatus as to permit an interference screw to pass between the first and second adjustable tensioning apparatus while securing a soft tissue graft to the bone tunnel; and

at least one suture strand separator configured for removable attachment to the tensioning device and adapted to maintain at least two suture strands attached to different ends of a multi-strand tissue graft in a desired space-apart relationship.

12. (Original) A tensioning system as defined in claim 11, the suture strand separator comprising a gripping head and a chiseled end opposite the gripping head that facilitates insertion of the suture strand separator between two or more suture strands.

13. (Original) A tensioning system as defined in claim 11, the suture strand separator comprising a first retention recess adapted to receive a first suture strand or group of suture strands and a second retention recess adapted to receive a second suture strand or group of suture strands, the first and second retention recesses being spaced-apart so as to maintain the first and second suture strands or groups of suture strands in the desired spaced-apart relationship.

14. (Original) A tensioning system as defined in claim 11, the suture strand separator comprising a pair of spaced-apart guide recesses adapted to mate with corresponding attachment posts within the attachment portion of the tensioning device.

15. (Original) A tensioning system as defined in claim 14, the tensioning system comprising two suture strand separators that are adapted to separate four suture strands or groups of suture strands into four spaced-apart quadrants.

16. (Previously Presented) A tensioning system as defined in claim 15, the two suture strand separators, when placed together to form a composite device so that the first and second retention recesses of one suture strand separator are on one side of the composite device and the first and second retention recesses of the other suture strand separator are on opposite side of the composite device, defining a central recess approximately midway between the sides of the composite device through which an interference screw can be inserted to affix a soft tissue graft to a bone tunnel when the tensioning system is in use.

17. (Original) A tensioning system as defined in claim 11, further comprising a tension calculator adapted for determining what portion of a total tensile load to be applied to a composite tissue graft is to be applied to each tissue graft strand individually.

18-24. (Cancelled)

25. (Previously Presented) A tensioning system for use in joint repair surgery involving independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning system comprising:

a tensioning device that provides for independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning device comprising:

an attachment portion configured to removably attach the tensioning device to a person's limb; and

a tensioning portion configured to independently apply a desired tensile load to each of at least two separate strands of a soft tissue graft, the tensioning portion comprising:

a first adjustable tensioning apparatus configured so as to selectively increase or decrease a first tensile load applied to a first strand of a soft tissue graft in communication with the first adjustable tensioning apparatus; and

a second adjustable tensioning apparatus configured so as selectively increase or decrease a second tensile load applied to a second strand of the soft tissue graft in communication with the second adjustable tensioning apparatus independently of the first tensile load applied by the first adjustable tensioning apparatus; and

a tension calculator adapted for determining what portion of a total tensile load to be applied to a composite tissue graft is to be applied to each tissue graft strand individually.

26. (Previously Presented) A tensioning system as defined in claim 25, further comprising a plurality of breakaway guide pins adapted for attachment to a patient's bone, each breakaway guide pin including one or more notches or grooves that facilitate preferential breakage of the guide pin at or near the one or more notches or grooves.

27. (Previously Presented) A tensioning system as defined in claim 26, the one or more notches or grooves of each breakaway guide pin being spaced apart from a tip of the guide pin so that, after insertion of the guide pin into a patient's bone and breaking off a first portion of the guide pin, a remaining portion of the guide pin will extend from a patient's leg.

28. (Previously Presented) A tensioning system as defined in claim 25, further comprising at least one suture strand separator configured for removable attachment to the tensioning device and adapted to maintain at least two suture strands attached to different ends of a multi-strand tissue graft in a desired space-apart relationship.

29. (Previously Presented) A tensioning system as defined in claim 25, each of the first and second adjustable tensioning apparatus further comprising a suture attachment wheel rotatably attached thereto.

30. (Currently Amended) A tensioning system for use in joint repair surgery involving independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning system comprising:

a plurality of breakaway guide pins adapted for attachment to a patient's bone, each breakaway guide pin including one or more notches or grooves that facilitate preferential breakage of the guide pin at or near the one or more notches or grooves and a protrusion positioned between a tip and the one or more notches or grooves that limits how far the guide pin can be inserted into a bone; and

a tensioning device that provides for independent tensioning of multiple tissue graft strands attached to a bone tunnel, the tensioning device comprising:

an attachment portion comprising a plurality of attachment posts, each configured to slidably attach to one of said breakaway guide pins when positioned in a bone so as to extend from a patient's leg; and

a tensioning portion configured to independently apply a desired tensile load to each of at least two separate strands of a soft tissue graft, the tensioning portion comprising:

a tensioning block;

a first adjustable tensioning apparatus attached to the tensioning block and configured so as to selectively increase or decrease a first tensile load applied to a first strand of a soft tissue graft in communication with the first adjustable tensioning apparatus; ~~and~~

a second adjustable tensioning apparatus attached to the tensioning block in a spaced-apart relationship with the first adjustable tensioning appratus and configured so as selectively increase or decrease a second tensile load applied to a second strand of the soft tissue graft in communication with the second adjustable tensioning apparatus independently of the first tensile load applied by the first adjustable tensioning apparatus; and

the tensioning block maintaining sufficient space between the first and second adjustable tensioning apparatus as to permit an interference

screw to pass between the first and second adjustable tensioning apparatus while securing a soft tissue graft to the bone tunnel.

31. (Previously Presented) A tensioning system as defined in claim 30, further comprising a tension calculator adapted for determining what portion of a total tensile load to be applied to a composite tissue graft is to be applied to each tissue graft strand individually.